

Desert Tortoise Survey Guidelines for Environmental Consultants  
March 1999

The following informal guidelines are intended to aid private consultants surveying for presence of tortoises on development projects in the Sonoran Desert. Following these guidelines will not provide quantified abundance estimates.

- 1) Surveys will be most productive during tortoise activity periods, primarily during the summer monsoon season but also in the spring. Tortoises are usually most active in the morning and evening during summer, late morning to afternoon in spring and fall. Results from summer/fall monitoring plots indicate that tortoises are active at temperatures from 20 to 45EC (1cm above ground).
- 2) Remember that Sonoran Desert tortoises usually occur on rocky slopes in desertscrub to semidesert grassland, as well as along washes extending into creosotebush flats from such slopes. Burrows typically occur below rocks and boulders and may be irregularly shaped. Soil burrows and those in wash banks may have a 1/2-moon appearance.
- 3) Three-mile triangular or loop transects (1 mile per transect leg), depending on topography, are recommended to survey a discrete parcel of land. The number of transects per unit area depends on the desired intensity of the survey.
- 4) Surveyors should record all live tortoises, carcasses, scat, verified burrows (with scat or tortoise inside), and otherwise suitable/potential burrows (empty).
- 5) Refer to the Department's "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" if handling will be necessary.

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